ELOCHUKWU, CHUKWUBUIKEM JOSEPH

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EDUCATION

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE, FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI. (JUNE, 2023)
Graduated with First Class Honors (top 1% in the University)
CGPA: 4.91 / 5.00
Research Interest: Artificial Intelligence, Machine Learning, Cloud computing and Cybersecurity.

RESEARCH EXPERIENCES

COURSE INSTRUCTOR, ARTIFICIAL INTELLIGENCE WITH PYTHON, NRI TECHNICAL INSTITUTE, KARU, NASARAWA STATE. (NOVEMBER, 2024 – DATE)

Topic: Development of an Adaptive Organizational Cybersecurity Maturity Framework Using Machine Learning.

- Participated in literature review and focus group meeting for requirement gathering.
- Currently contributing to the development of the Adaptive Organizational Cybersecurity Maturity (AOCM) Framework, using the Design Science Research (DSR) strategy.

GRADUATE ASSISTANT, CENTER FOR CYBERSPACE STUDIES, NASARAWA STATE UNIVERSITY, KEFFI, NASARAWA STATE. (JUNE, 2023 – NOVEMBER, 2024)

Topic: Machine Intelligence Support System for Offensive Cyber Operations

- Employed a mixed research methodology, combining diverse approaches in Design Science Research (DSR) with qualitative and quantitative methods, adopting a pragmatist research philosophy.
- Contributed to the development of the Machine Intelligence Cyber Operation (MICO) Framework, a theoretical model for intelligent offensive cyber operations in a security context.
- Utilized NumPy and Pandas libraries for creation and analysis of a dataset of 32768 rows and 27 columns from publicly available information on ports and vulnerabilities.
- Developed and evaluated a total 6 Regression models and 6 Multiple Output Classification models using 7 metrics each and analyzed the results to pick the optimal models, Multi-Layer Perceptron (MLP) Regressor and Classifier, to predict target percentage vulnerability and suggest attacks.
- Designed and built a web application using the Flask Python framework as proof-of-concept, automating the reconnaissance stage of offensive cyber-attacks and integrating the machine learning models to provide actionable insights.
- Attended focus group meetings especially for requirement gathering and artefact evaluation.
- Prepared 3 manuscripts for publication, one of which has been presented at an IEEE Nigeria international conference.

PROJECT STUDENT, COMPUTER SCIENCE DEPARTMENT, FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI, IMO STATE. (SEPTEMBER, 2021 – JANUARY, 2023)

Topic: An Intelligent Progressive Web Based System for Primary Health Facilities in Nigeria

- Developed and implemented an Intelligent Progressive Web Based Hospital Management System for FUTO medical center using the LAMP programming stack, Microsoft Azure AI services, and JavaScript for PWA enhancement.
- Conducted literature reviews and used the Object-Oriented Analysis and Design Methodology, and the Object-Oriented SDLC for the analysis and design of the project.
- Prepared two manuscripts and PowerPoint slides for conference presentation, and publication.

AWARDS AND HONOURS

FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI (FUTO). (DECEMBER, 2023)
Overall Best Graduating Student, 2020/2021 graduating set.
Best Graduating Student, School of Information and Communication Technology.
Best Graduating Student, Computer Science Department.

FUTO CLASS OF '92 CLUB AWARD. (OCTOBER, 2023)

Best Graduating Student, School of Information and Communication Technology.

NIGERIA FEDERATION OF CATHOLIC STUDENTS, FUTO CHAPTER. (OCTOBER, 2020)

Most Disciplined Brother of the Year 2020/2021 academic session

NIGERIA ASSOCIATION OF COMPUTING STUDENTS, FUTO CHAPTER. (OCTOBER, 2019)

Departmental Best Student of the Year.

MTN FOUNDATION. (OCTOBER, 2019)

2019 MTN Foundation Science and Technology Undergraduate Scholarship.

TEACHING EXPERIENCES

COURSE INSTRUCTOR, ARTIFICIAL INTELLIGENCE WITH PYTHON, NRI TECHNICAL INSTITUTE, KARU, NASARAWA STATE. (NOVEMBER, 2024 – DATE)

- Developed the course curriculum covering key AI concepts and Python programming skills.
- Creating engaging and informative course materials, including lecture notes, assignments and assessments.

GRADUATE ASSISTANT, CENTER FOR CYBERSPACE STUDIES, NASARAWA STATE UNIVERSITY, KEFFI, NASARAWA STATE. (JUNE 2023 – OCTOBER, 2024)

- Designed slides and presented physical and online lectures on the Introduction to programming course for data science post graduate diploma students, and set exams for 13 students.
- Designed and led hands on practical session on introduction to python programming as part of the Research Methodology course for computer science undergraduate third year students.
- Conducted two practical sessions during the one-week introduction to python for data science workshop for 16 data science post-graduate students.

NATIONAL YOUTH SERVICE CORPS, SHUAIBU IBRAHIM E-LIBRARY, NASARAWA, NASARAWA STATE. (DECEMBER 2023 – OCTOBER, 2024)

- Prepared 267 students for their Joint Admissions and Matriculations Board (JAMB) 2024 examination.
- Taught computer appreciation course for non-majors, presented classes and practical sessions on the basic use of computer and some computer applications to 46 students for community development.

PROFESSIONAL EXPERIENCES

STUDENT INTERN, HUAWEI TECHNOLOGIES COMPANY NIGERIA LIMITED, LEKKI, LAGOS. (MAY – JULY, 2021)

- Outsourced to the 9mobile service desk under Huawei Service Management team to ensure the service level agreement is not breached.
- Came top 1% in the company's MySQL Database Management Test.

STUDENT INTERN, DEACONS DIGITAL SOLUTIONS, ONITSHA, ANAMBRA. (AUGUST 2020 – MAY 2021)

- Participated in the backend development of a podcast and e-learning website using LAMP development stack.
- Improved the applications into a progressive web app (PWA) which improved user experience.

COMMUNITY SERVICES

Supervised 8 computer science undergraduate students of Nasarawa State University Keffi, in their undergraduate final year project. (August 2023 – January 2024)

Mentored 3 co-students to complete their ALX Cloud Developer Nanodegree program with ALX and Udacity. (August – September, 2022)

PUBLICATIONS

CONFERENCE PAPERS

Elochukwu C., Njoku D., Onyemauche U., Okpalla C., Okolie S., and Ikwuazom C., "Leveraging AI Chat Bots and Messaging Platforms for Remote Healthcare Delivery in Nigeria." International Conference on Technological Solutions for Smart Economy (SmartEco 2024), Nigeria Computer Society, August 2024.

Elochukwu C., Njoku D., Okpalla C. and Odii J., "Progressive Web Application for Seamless Primary Healthcare Delivery in Nigeria." International Conference on Technological Solutions for Smart Economy (SmartEco 2024), Nigeria Computer Society, August 2024.

Abdullahi G., Mbanaso U., **Elochukwu C.** and Muhammad S., "Conceptual Design of Machine Intelligence Offensive Cyber Operations." 5th IEEE International Conference on Electro-Computing Technologies for Humanity (Nigercon_2024), November 2024.

TRAININGS AND CERTIFICATIONS

NIGERIAN COMMUNICATION COMMISSION

Workshop on Cyber Security Awareness, Nasarawa State University, Keffi (June, 2023).

COURSERA.

AI for Scientific Research Specialization Certificate (October, 2023).

Google IT Support Professional Specialization Certificate (April, 2023).

Python for Everybody Specialization (June, 2022).

Python 3 Programming Specialization Certificate (August, 2022).

CISCO NETWORKING ACADEMY.

PCAP: Programming Essentials in Python (May, 2023).

CCNAv7: Introduction to Networks (January, 2022).

GOOGLE, ANDELA AND PLURALSIGHT AFRICA DEVELOPERS SCHOLARSHIP (GADS).

Associate Cloud Engineering Certificate (March, 2023).

ALX-T AND UDACITY NANODEGREE SCHOLARSHIP PROGRAM.

Cloud Development Certificate (July, 2022).

PROFESSIONAL AFFILIATIONS

COMPUTER PROFESSIONALS (REGISTRATION COUNCIL OF NIGERIA).

Graduate Membership (February, 2023).

NIGERIA COMPUTER SOCIETY.

Graduate Membership (August, 2024).

LEADERSHIP AND VOLUNTEER EXPERIENCES

NATIONAL YOUTH SERVICE CORPS, NASARAWA, NASARAWA STATE.

President, Road Safety Community Development Group (May – October, 2024)

Director of Outreach, Road Safety Community Development Group (February – May, 2024)

STUDENT UNION GOVERNMENT, FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI.

Independent Students' Electoral Commissioner (November – December, 2022)

Computer Science Course Representative (November 2017 – June 2023)

NIGERIA FEDERATION OF CATHOLIC STUDENTS (NFCS), FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI.

Chief Sacristan (President), Altar Servers Association (2020/2021 Academic Session)

Public Relations Officer, NFCS FUTO (2018/2019 Academic Session)

Editorial Chairman, De Lumen Press, NFCS FUTO (2018/2019 Academic Session)

SKILLS & ABILITIES

Use of Overleaf LaTeX, Programming in Python 3, Working with Scikit-learn, NumPy and Pandas, Working with SQL database queries, Use of Git and GitHub, Streamlit and Flask Python web frameworks, Working with Windows and Kali Linux OS, System Administration, IT Security and IT Support.